

Application No. 09/875,756
Amendment "A" dated November 2, 2005
Reply to Office Action mailed May 2, 2005

REMARKS

The non-final Office Action, mailed May 2, 2005, considered claims 1-34 of the present application. In the Office Action, the Examiner has indicated that claims 19-34 are allowed, while claims 8 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 1-4 and 11-14 were rejected under 35 U.S.C. § 102(e) as being anticipated by Barton (U.S. Patent No. 6,163,842). Claims 5-7, 9, 10 and 16-18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Barton (U.S. Patent No. 6,163,842) in view of the Examiner taking official notice.¹

By this paper, the specification has been amended in paragraph [02] of the originally filed application, so as to correct a minor grammatical error. By this paper, claims 1, 4, 5, 10 and 12 have been amended,² while no claims have been added or cancelled, such that claims 1-34 remain pending. Of these, claims 1, 12, 19, 25 and 31 are the only independent claims.

Rejections under 35 U.S.C. 102(e)

Claims 1-4 and 11-14 are rejected under 35 U.S.C. § 102(e) as being anticipated by Barton (U.S. Patent No. 6,163,842). Applicants respectfully disagree and submit that the Barton reference does not anticipate the present invention as recited in claims 1-4 and 11-14, particularly as amended, in that it does not teach or suggest each and every recited limitation.

Initially, it will be noted that the present invention is directed to a method (claim 1) and a computer program product (claim 11) for digitally signing an electronic document such that the digital signature is embedded in the electronic document. As recited in claim 1, for example, the method includes creating an electronic document by providing content for the electronic document. Then, a signature block for each person signing the document is inserted and

¹ Although the prior art status and some of the assertions made with regard to the cited art is not being challenged at this time, Applicants reserve the right to challenge the prior art status and assertions made with regard to the cited art, as well as any official notice, which was taken in the last Office Action, at any appropriate time in the future, should the need arise, such as, for example in a subsequent amendment or during prosecution of a related application.

² Support for the claim amendments is clearly found within paragraphs [010], [028], [041], [068] and Figures 3A-3D, among other passages and figures of the originally filed application. Accordingly, it is respectfully submitted that the amendments to the claims do not add new matter, and entry thereof is respectfully submitted.

Application No. 09/875,756
Amendment "A" dated November 2, 2005
Reply to Office Action mailed May 2, 2005

embedded in the electronic document, where each signature block has one or more attributes, including at least a signature attribute. Thereafter, when a person digitally signs the electronic document, one or more of the attributes are filled before the digital signature for the electronic document is generated. When the digital signature is generated, the filled one or more attributes are included and the digital signature placed in the signature attribute of the signature block of the person digitally signing the electronic document. Further, and as clarified by the above amendment, the signature attribute corresponds to the digital signature of the person digitally signing the document.

Although Barton generally deals with methods for embedding attributes and digital signatures in data blocks, Applicants note that the cited reference fails to teach a method which acts in the manner claimed, and thereby fails to anticipate or make obvious the claimed invention. In particular, the cited art fails to teach or suggest, among other things, (i) inserting a signature block for each person digitally signing the document, each signature block including at least a signature attribute, and (ii) filling some of the one or more attributes when a signer digitally signs an electronic document, and doing so *before* generating the digital signature for the electronic document, as claimed.

Instead, Barton teaches that a digital block is a data file or data stream (i.e. video or audio), such that the digital block is *content*, rather than a signature block inserted into the document containing that content, as claimed. (See col. 56, ln. 66 to col. 6, ln. 3).

Barton discloses that the digital block (i.e. content) is authenticated by embedding a single bit string made up of meta-data and a digital signature. (Col. 5, ln. 66 to col. 6, ln. 5; col. 6, ln. 66 to col. 7, ln. 35). Nevertheless, the embedded bit string also fails to act as the claimed signature block. In particular, the bit string contains information solely related to the data file or data stream, and is not a signature block for each person that will digitally sign a document, as claimed. In fact, both the meta-data and the digital signature are based on, and solely related to, data content rather than a person digitally signing the document. In particular, the meta-data specifies only arbitrary attributes of the data file or data stream itself (col. 2, ln. 66 to col. 3, ln. 2), while the digital signature is determined by using an algorithm or calculation technique employed on the data block itself (col. 4, ln. 1-14; col. 4, ln. 21-27; col. 8, ln. 51-57). In other words, Barton only discloses using an algorithm to calculate a digital signature based on the

Application No. 09/875,756
Amendment "A" dated November 2, 2005
Reply to Office Action mailed May 2, 2005

content, and fails to disclose any person digitally signing a document. Accordingly, any attribute of the bit string corresponds merely to the digital block itself, rather than to the digital signature *of the person digitally signing the document*, as claimed.

Additionally, rather than teaching or suggesting a method wherein when a person digitally signs an electronic document, one or more attributes are filled in before generating the digital signature for the document, Barton discloses a method for embedding the bit string in the content file or stream *after* the digital signature is calculated. In particular, Barton discloses a digital information embedding process in which the first step includes calculating a digital signature for the data block. (Figure 1; col. 6, ln. 65 to col. 7, ln. 3). Only thereafter is the calculated signature appended to the meta-data bit string (col. 7, ln. 4-7), and the bit string embedded into the digital block (col. 7, ln. 33). Accordingly, Barton teaches that a digital signature is generated before any meta-data, error correction code, or any other data is, filled in, inserted into, or embedded in, the digital block. Thus, Applicants respectfully submit that Barton fails to teach filling some of the one or more attributes before generating the digital signature for the electronic document, as recited in claim 1, particularly when combined with the other recited elements. Accordingly, Barton fails to anticipate claims 1 and 11.

Similarly, Barton fails to anticipate the present invention as recited in claim 12. With respect to claim 12, the claimed invention is generally directed to an electronic document having an embedded digital signature in a system which requires digital signatures for electronic documents, wherein the digital signatures are attached to the electronic documents while they can also be separated from the electronic document. In particular, the electronic document comprises a content portion, and a signature block for each person that will digitally sign the electronic document. Each signature block is separate and embedded in the electronic document before the electronic document is digitally signed. Each signature block includes a signature element having a signature attribute for storing the digital signature of the person digitally signing the electronic document, and a certificate attribute that stores a digital signature of a certificate authority.

For at least the reasons identified above with respect to claims 1 and 11, Barton also fails to anticipate the claimed invention as recited in claim 12. In particular, as previously noted, the digital signature in Barton is based solely on the content of a data file or stream, and Barton fails

Application No. 09/875,756
Amendment "A" dated November 2, 2005
Reply to Office Action mailed May 2, 2005

to disclose any *person* digitally signing an electronic document. In addition, Applicants respectfully submit that Barton does not disclose, teach, or suggest an electronic document having a signature block which includes a certificate attribute that stores a digital signature of a certificate authority, as claimed. Instead, the embedded bit string in Barton merely identifies arbitrary attributes of the data stream, including "file permission, file type, application type, serial number, creator identification, [and] licensee identification." (see abstract; col. 2, ln. 66 to col. 3, ln. 2). Notably, of these various file attributes, none is a certificate, let alone a certificate attribute in a signature element that "stores a digital signature of a certificate authority." Accordingly, Barton fails to teach or suggest a digital signature *of a certificate authority*, as claimed, and particularly in combination with the other recited elements. Accordingly, for at least these reasons, Applicants respectfully submit that Barton fails to anticipate the claimed invention as recited in claim 12.

Accordingly, and in conclusion, Applicants respectfully submit that Barton fails to anticipate the present invention as recited in claims 1, 11 and 12. Notably, Claims 2-10 and 13-18 depend from base claims 1 and 12, respectively, and thus incorporate all the limitations presented respectively therein. As a result, pending claims 1-19 should be allowable over the cited art. Thus, reconsideration of the above-identified claims is now respectfully submitted.

Rejections under 35 U.S.C. 103(a)

Claims 5-7, 9, 10 and 16-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Barton in view of the Examiner taking official notice. Applicants note that claims 5-7, 9 and 10 depend from claim 1, while claims 16-18 depend from claim 12. Applicants respectfully submit that as claims 1 and 12 are allowable over the cited art, the rejections to dependent claims 5-7, 9, 10 and 16-18 under 35 U.S.C. § 103(a) are, by definition, moot and therefore need not be addressed individually. Accordingly, Applicants expressly reserve the right to challenge any official notice taken in any subsequent action.

Nevertheless, Applicants respectfully note that official notice is proper only where capable of such instant and unquestionable demonstration as to defy dispute. M.P.E.P. § 2144.03. Further, if such notice is taken, "the basis for such reasoning must be set forth

Application No. 09/875,756
Amendment "A" dated November 2, 2005
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explicitly. The examiner must provide specific factual findings predicated on sound technical and scientific reasoning to support his or her conclusion." *Id.*

In support of the official notice, the Office Action indicates that the elements recited in claims 5-7, 9, 10 and 16-18 are "very well known in the prior art" and "comprise the essential ingredients in a secure environment which protects sensitive material from attack." Applicants respectfully submit that such brief remarks do not "provide specific factual findings predicated on sound scientific reasoning" for taking official notice.

For example, Applicants respectfully disagree with the argument that displaying the name of a signer on the electronic document after the electronic document is digitally signed by the signer (claims 10 and 17), or displaying that name in color (claim 18) are "the essential ingredients in a secure environment which protects sensitive material from attack." In fact, Applicants submit that the display of such information may, arguably, make material more prone to attack or unauthorized discovery, as compared to information that is encrypted or which is not readily observable. Moreover, Barton expressly teaches that embedded information is embedded in a way "that avoids detection by a casual observer," and therefore teaches away from displaying the name of a signer, as claimed.

Accordingly, in support of the Official Notice taken, Applicants respectfully request that the Examiner cite reference directed to the elements recited in claims 5-7, 9, 10 and 16-18, as well as provide a motivation to combine such references with the other art of record. Nevertheless, because claims 5-7, 9, 10 and 16-18 are dependent on allowable base claims, Applicants submit that claims 5-7, 9, 10 and 16-18 are allowable over the cited art and official notice, even if such references are provided.

Conclusion

By this paper, claims 1, 4, 10, and 12 have been amended, while no claims have been added, or cancelled. Claims 19-34 have been indicated as allowable, and claims 8 and 10 have been objected to, but would be allowable in independent form. As amended, claims 1-18 should now be found in condition for allowance in light of the remarks herein. Accordingly, reconsideration and allowance of the above-identified claims are now respectfully requested. In the event that the Examiner finds any remaining impediment to a prompt allowance of this

Application No. 09/875,756
Amendment "A" dated November 2, 2005
Reply to Office Action mailed May 2, 2005

application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at (801) 533-9800.

Dated this 2 day of November, 2005.

Respectfully submitted,

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